ORDER NO. CPD0604058C0

Service Manual

Notebook Computer

CF-18

TOUGHBOOK

This is the Service Manual for
the following areas.
W …for Japan

Model No. CF-18JHU70TW

Panasonic®

WARNINGS

For U.K.

This apparatus must be earthed for your safety.

To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring.
Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.
The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe.
For your safety, if you have any doubt about the effective earthing of the power point, consult a qualified electrician.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 3 amp fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 3 amps and that it is approved by ASTA or BSI to BS 1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.
If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.
If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

Warning: THIS APPLIANCE MUST BE EARTHED.

Important

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

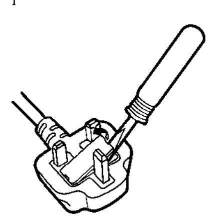
As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ coloured GREEN or GREEN-and-YELLOW.

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured RED.

The mains plug on this equipment must be used to disconnect the mains power.
Please ensure that a socket outlet is available near the equipment and shall be easily accessible.

■ How to replace the fuse

Open the fuse compartment with a screw-driver and replace the fuse.



Warnings

- This equipment is not designed for connection to an IT power system.
  (An IT system is a system having no direct connections between live parts and Earth; the exposed-conducive-parts of the electrical installation are earthed.
  An IT system is not permitted where the computer is directly connected to public supply systems in the U.K.)
- Disconnect the mains plug from the supply socket when the computer is not in use.

This equipment is produced to BS800/1983.

LASER SAFETY INFORMATION

For U.S.A.

Class 1 LASER-Product

This product is certified to comply with DHHS Rules 21 CFR Subchapter J.
This product complies with European Standard EN60825 (or IEC Publication 825)

For all areas
This equipment is classified as a class 1 level LASER product and there is no hazardous LASER radiation.

Caution:
(1) Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
(2) The drive is designed to be incorporated into a computer-based system or unit which has an enclosing cover. It should never be used as a stand alone drive.

Danger:
The serviceman should not remove the cover of drive unit and should not service because the drive unit is a non-serviceable part.
Please check DANGER label on PD-drive unit.

- Unplug the AC power cord to the equipment before opening the top cover of the drive.
- When the power switch it on, do not place your eyes close to the front panel door to look into the interior of the unit.

LASER Specification

Class 1 level LASER Product
Wave Length: DVD 658±8 nm
CD 775~815 nm

Laser safety information is appropriate only when drive with laser is installed.

Safety precautions

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacture's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.

Important Safety Instructions

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.

SAVE THESE INSTRUCTIONS

Lithium Battery

Lithium Battery!

This computer contains a lithium battery to enable the date, time, and other data to be stored. The battery should only be exchanged by authorized service personnel.

Warning! A risk of explosion from incorrect installation or misapplication may possibly occur.

LITHIUM BATTERY ⚠

- **CAUTION**

  Danger of explosion if battery is incorrectly replaced.
  Replace only with the same or equivalent type recommended by the equipment manufacture.
  Discard used batteries according to the manufacturer's instructions.

LITHIUMBATTERIES ⚠

Vorsicht!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Ersatz nur durch denselben order einen vom Hersteller empfohlenen ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

PILE AU LITHIUM ⚠

ATTENTION: IL Y A DANGER D'EXPLOSION S' IL Y A REMPLACEMENT INCORRECT DE LA PILE. REMPLACER UNIQUEMENT AVEC UNE PILE DU MÈME TYPE OU D'UN TYPE RECOMMANDÉ PAR LE CONSTRUCTEUR. METTRE AU RÉBUT LES PILES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS DU FABRICANT.

For U.S.A. / CANADA

RECYCLE RBRC Li-ion 1.800.822.8837

A lithium ion battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

L'appareil que vous vous êtes procuré est alimenté par une batterie au lithium-ion. Pour des renseignements sur le recyclage de la batterie, veuillez composer le 1-800-8-BATTERY.

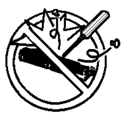
- Care should be exercised with regard to the following in order to avoid the possibility of overheating, fire or damage.



Avoid Heat
Do not throw the battery pack into a fire or expose it to excessive heat.



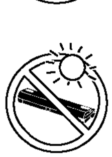
Keep Articles Away
Do not place the battery pack together with articles such as necklaces or hairpins when carrying or storing.



Do Not Disassemble
Do not insert sharp objects into the battery pack, expose it to bumps or shocks, deform, disassemble, or modify it.



Do Not Short
Do not short the positive (+) and negative (-) contacts.



Avoid Extreme Heat, Cold and Direct Sunlight
Do not charge, use or leave the battery pack for extended periods where it will be exposed to direct sunlight, in a hot place (in an automobile on a sunny day, for example), or in a cold place.



Do Not Use With Any Other Computer
The battery pack is rechargeable and was intended for the specified computer or charger. Do not use it with a computer other than the one for which it was designed.



Do Not Put into a Microwave
Do not put the battery pack into a microwave oven or a pressurized chamber.



Discontinue Use
Should the battery emit an abnormal odor, become hot to the touch, become discolored, change shape, or become in any way different from normal, remove it from the computer or charger and discontinue use.

- Do not touch the terminals on the battery pack. The battery pack may no longer function properly if the contacts are dirty or damaged.
- Do not expose the battery pack to water, or allow it to become wet.
- If the battery pack will not be used for a long period of time (a month or more), charge or discharge (use) the battery pack until the remaining battery level becomes 30% to 40% and store it in a cool, dry place.
- This computer prevents overcharging of the battery by recharging only when the remaining power is less than approx. 95% of capacity.
- The battery pack is not charged when the computer is first purchased. Be sure to charge it before using it for the first time. When the AC adaptor is connected to the computer, charging begins automatically.
- Should the battery leak and the fluid get into your eyes, do not rub your eyes. Immediately flush your eyes with clear water and see a doctor for medical treatment as soon as possible.

NOTE

- The battery pack may become warm during recharging or normal use. This is completely normal.
- Recharging will not commence outside of the allowable temperature range (0 °C to 50 °C {32°F to 122 °F}).(☞ Reference Manual "Battery Power") Once the allowable range requirement is satisfied, charging begins automatically. Note that the recharging time varies based on the usage conditions. (Recharging takes longer than usual when the temperature is 10 °C {50 °F} or less.)
- If the temperature is low, the operating time is shortened. Only use the computer within the allowable temperature range.
- The battery pack is a consumable item. If the amount of time the computer can be run off a particular battery pack becomes dramatically shorter and repeated rechargings do not restore its performance, the battery pack should be replaced with a new one.
- When transporting spare batteries inside a package, briefcase, etc., it is recommended that it be placed in a plastic bag so that its contacts are protected.
- Always power off the computer when it is not in use. Leaving the computer on when the AC adaptor is not connected will exhaust the remaining battery capacity.

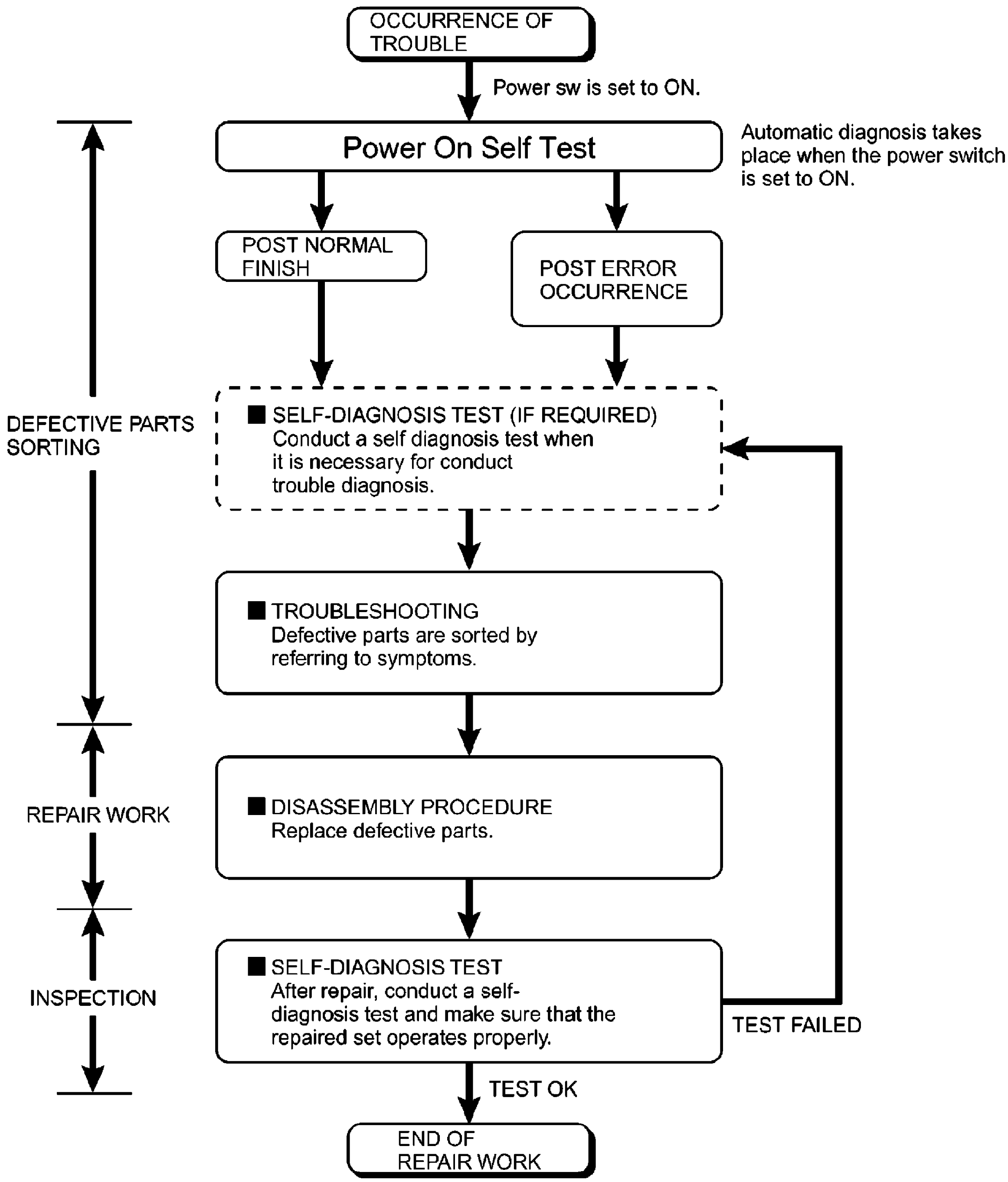
CONTENTS

1 Diagnosis Procedure

Basic Procedures

The basic procedures for diagnosis, disassembly, and test of defective parts of a set to be repaired are summarized below. For details, refer to relevant pages in the Service Manual.

● **Flow Chart**



2 Power-On Self Test (Boot Check)

Outline of POST

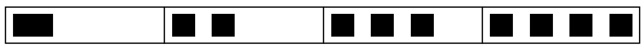
The set has a boot check function called POST (Power-On Self Test) in it. The condition of the main body is diagnosed by checking beep sound or error code.

- Start ....Test begins automatically when power switch is set to ON.
- Normal finish .....After memory checking, a beep sound is issued once and the set is placed into automatic stop.

Note: If no error occurs, nothing is displayed. (No display of OK, etc.)

Error Diagnosis by Checking Beep Signal Sound

The beep sound is as follows:


(1 (long sound) -2-3-4)

(Length of bar shows length of sound.)

▬ = long sound (about 0.4 sec.), ■ = short sound (about 0.2 sec.), Length between sounds is about 0.1 sec.

- **Table of errors classified by beep sounds**

Diagnosis	Beep signal sound	Error message
Main board	1(long sound)-2	BIOS ROM error
	1-2-2-3	BIOS ROM error
	1-3-1-1	RAM error
	1-3-1-3	Keyboard controller error
	1-3-4-1	RAM error
	1-3-4-3	RAM error
	1-4-1-1	RAM error
	2-1-2-3	BIOS ROM error
	2-2-3-1	Occurrence of unexpected offering

(Note) A beep sound is also issued in case of other I/O trouble.

3 List of Error Codes <Only when the port replicator is connected>

The following is a list of the messages that BIOS can display. Most of them occur during POST. Some of them display information about a hardware device, e.g., the amount of memory installed. Others may indicate a problem with a device, such as the way it has been configured. Following the list are explanations of the messages and remedies for reported problems.
If your system displays one of except the messages marked below with an asterisk (*), write down the message and contact Panasonic Technical Support. If your system fails after you make changes in the Setup menus, reset the computer, enter Setup and install Setup defaults or correct the error.

0200 Failure Fixed Disk
Fixed disk in not working or not configured properly. Check to see if fixed disk is attached properly. Run Setup. Find out if the fixed-disk type is correctly identified.

0210 Stuck key
Stuck key on keyboard.

0211 Keyboard error
Keyboard not working.

0212 Keyboard Controller Failed
Keyboard controller failed test. May require replacing keyboard controller.

0213 Keyboard locked - Unlock key switch
Unlock the system to proceed.

0230 System RAM Failed at offset : *nnnn*
System RAM failed at offset *nnnn* of in the 64k block at which the error was detected.

0231 Shadow RAM Failed at offset : *nnnn*
Shadow RAM failed at offset *nnnn* of the 64k block at which the error was detected.

0232 Extended RAM Failed at offset : *nnnn*
Extended memory not working or not configured properly at offset *nnnn*.

0250 System battery is dead - Replace and run SETUP
The CMOS clock battery indicator shows the battery is dead. Replace the battery and run Setup to reconfigure the system.

***0251 System CMOS checksum bad - Default configuration used**
System CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS. The BIOS installed Default SETUP Values. If you do not want these values, enter Setup and enter your own values. If the error persists, check the system battery or contact Panasonic Technical Support.

0260 System timer error
The timer test failed. Requires repair of system board.

0270 Real time clock error
Real-time clock fails BIOS test. May require board repair.

***0280 Previous boot incomplete - Default configuration used**
Previous POST did not complete successfully. POST loads default values and offers to run Setup. If the failure was caused by incorrect values and they are not corrected, the next boot will likely fail. On systems with control of **wait states**, improper Setup settings can also terminate POST and cause this error on the next boot. Run Setup and verify that the wait-state configuration is correct. This error is cleared the next time the system is booted.

0281 Memory Size found by POST differed from EISA CMOS
Memory size found by POST differed from EISA CMOS.

02D0 System cache error - Cache disabled

Contact Panasonic Technical Support.

02F0: CPU ID:

CPU socket number for Multi-Processor error.

02F4: EISA CMOS not writable

ServerBIOS2 test error: Cannot write to EISA CMOS.

02F5: DMA Test Failed

ServerBIOS2 test error: Cannot write to extended DMA (Direct Memory Access) registers.

02F6: Software NMI Failed

ServerBIOS2 test error: Cannot generate software NMI (Non-Maskable Interrupt).

02F7: Fail - Safe Timer NMI Failed

ServerBIOS2 test error: Fail-Safe Timer takes too long.

***device* address Conflict**

Address conflict for specified *device*.

Allocation Error for: *device*

Run ISA or EISA Configuration Utility to resolve resource conflict for the specified *device*.

Failing Bits : *nnnn*

The hex number *nnnn* is a map of the bits at the RAM address which failed the memory test. Each 1 (one) in the map indicates a failed bit. See error 230,231 or 232 for offset address of the failure in System, Extended or Shadow memory.

Invalid System Configuration Data

Problem with NVRAM (CMOS) data.

I/O device IRQ conflict

I/O device IRQ conflict error.

Operating System not found

Operating system cannot be located on either drive A: or drive C:. Enter Setup and see if fixed disk and drive A: are properly identified.

Parity Check 1 *nnnn*

Parity error found in the system bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????. Parity is a method for checking errors in binary data. A parity error indicates that some data has been corrupted.

Parity Check 2 *nnnn*

Parity error found in the I/O bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????.

Press <F1> to resume, <F2> to Setup

Displayed after any recoverable error message. Press <F1> to start the boot process or <F2> to enter a Setup and change the settings. Write down and follow the information shown on the screen.

4 Diagnostic Test

Diagnostic Test Procedure

4.1. Equipment

(1) Test Computer -- 1 unit
(2) External Floppy Disk Drive (USB Port) --- 1 unit
(3) AC Adapter -- 1 pc.
(4) Loopback Plug (Serial Port Test for RS232C) [P/N: DFWV95C0067] ---- 1 pc.
(5) Floppy Disk containing file DIAG --- 1 pc.

4.2. Preparation

(1) Connect the AC Adapter and External Equipments.
(2) The System Setup should be set to the factory setting values by executing the "SETUP UTILITY" which can be invoked by F2 key at the POST.
If not, the messages and items of the diagnostic test may not be displayed properly on the LCD.
(3) The serial port must be enabled in the "SETUP UTILITY" in order to execute the "1st SERIAL PORT" test.
(4) Connect the serial loopback plug.

5 Self Diagnosis Test

Floppy disk is Included for the self-diagnostic tests that should be performed before using this product.
Important notice

1. System password
   If the password function has been turned on, you will need to ask the user for the password before performing the self-diagnostics.

2. FDD test
   Performing the FDD test will erase the contents of the floppy disk you insert into the drive. Use a formatted disk that has no contents or whose contents are not required. This product has a password function. However, if this function is turned on, the self-diagnostics tests will not work.

5.1. Outline of Self Diagnostic Tests

Insert the diagnostics floppy disk

↓

Return the setup contents to default

● Starting up the setup utility
① Turn on the power.
② When "Panasonic Press F2 to enter setup" appears on the screen, press F2.
③ Press "→" to select 「Exit」
④ Press "↓" to select 「Get default value」
⑤ Press Enter.
⑥ Choose Yes for "Load default Configuration now?"
⑦ Select "Save Values & Exit" and press Enter.
⑧ Choose Yes for "Save Configuration changes and exit now?" and press Enter.

↓

Choose test from the menu screen to start the test.

Caution:
After completing repairs, be sure to carry out the Automatic test and Peripheraltest.

● Menu Screen

1. DIAG on FD (CF-18 XP/2000 Model)
2. DIAG on FD (CF-18 Tablet Model)
3. LAN Test
4. Modem Test
5. Wireless LAN test (Wireless LAN Model only)
6. Button Test
Q. Quit
Select please [1, 2, 3, 4, 5, 6, Q] ?

↓

<Automatic test>	<Peripheral test>	<Test selection>
Tests selected (O) from the test item list will be performed in succession. DIAG on FD	The parallel port and CD-ROM drive can be tested. (See 5.3 for details.) 3. LAN Test 4. Modem Test 5. Wireless LAN test (Wireless LAN Model only) 6. Button Test	Specifc tests required can be freely selected and performed from the test item list. Be sure to carry out the Selection test only when necessary.

↓

Problems in the unit are located and divided according to error messages that occur during testing.

5.1.1 List of main test items

The Selection item displays the items selected under Automatic test. If you select Automatic test, these test items will be performed automatically. You can use Selection test to choose items from the menu screen that you want to have tested.
These items are shown below.

1		SPEAKER TEST	Speaker test	○
2		VESA MODE TEST	VESA mode test	○
3	CPU (CPU related)	A20 GATE TEST	Address A20 line	○
4		CACHE ON/OFF TEST	Cache memory on/off test	○
5		NPU OPERAND TEST	Floating point processor function test	○
6	RAM (Memory related)	RAM STANDARD TEST	Memory standard test	○
7	CONTROL (Control ICs on the main board, etc.)	DMA PAGE REG TEST	DMA page register test	○
8		DMA REGISTER TEST	DAM register test	○
9		DMAC TRANSFER TEST	DAM transfer test	○
10		PIC HALT INSTRUCTION TEST	Interrupt controller halt instruction test	○
11		PIC REGISTER TEST	Interrupt controller register test	○
12		RTC CMOS RAM TEST	Real time clock CMOS test	○
13		RTC TEST	Real time clock test	○
14		PIT CH0 TEST	interrupt timer CH0	○
15		PIT CH1 TEST	interrupt timer CH1	○
16		PIT CH2 TEST	interrupt timer CH2	○
17	IO (Input-output)	KEYBOARD REG TEST	Keyboard test	○
18		PS/2 MOUSE REG	Mouse registration test	○
19	COMMUNICATION	SERIAL WRAP TEST	Serial loop back (jig required)	—
20		SERIAL ALL INTERNAL TEST	Serial port interior test	○
21		PARALLEL REGISTER R/W	Parallel register R/W test	○
22	AUX (Auxiliary functions)	PCIC ALL TEST	PCIC test	○
23		Card Bus Reg	Card Bus register test	○
24		USB Reg	USB register test	○
25	VIDEO (Display related)	VGA ALL TEST	VGA test	○
26		SVGA RAM TEST	SVGA RAM test	○
27	DISK (FDD, HDD)	FD WT/RD/WP TEST	FD WT, RD WP test	—
28		HDD ALL TEST	Only HDD lead test selected	○
29	UNIQUE (Individual functions)	ECP REGISTER R/W	ECP register R/W test	○
30		EPP REGISTER R/W	EPP register R/W test	○
31		EXT. CMOS R/W TEST	Extension CMOS R/W test	○

	Test function settings	Test condition save/play	Following file command
		Test automatic execute	Test executed on run settings by selecting command
		Error display (Paging style)	Select displayed items Error, Log, Option

5.2. Automatic Test

Test execution

From the menu screen shown below For Celeron models Select and press Enter for DIAG on FD

```
1. DIAG on FD (CF-18 XP/2000 Model)
2. DIAG on FD (CF-18 Tablet Model)
3. LAN Test
4. Modem Test
5. Wireless LAN test (Wireless LAN Model only)
6. Button Test
Q. Quit
Select please [ 1, 2, 3, 4, 5, 6, Q ] ?
```

menu screen

Speaker test, VESA test
The speaker test involves listening to music and choosing OK or Not okay. The VESA test involves looking at the display to see if it is satisfactory then choosing OK or Not okay.

Serial loop back test
The Automatic test’s initial settings are set so that the serial loop back test will be executed. Connect the serial loop back jig and then perform the test.
(This test is not executed on default mode)

Diagnostics result

If no errors occur. The screen shows the word "Pass" in large letters.
If errors occur. The test is stopped when an error occurs and the error message is displayed.
For explanations of error messages, see Error Messages and Problem Categories (section 5.5).

Quitting the test

At the screen shown below, simultaneously press the ALT and X keys.



Input screen

5.3. Peripheral Test

Test execution

From the menu screen shown below, be sure to choose the following items and press Enter.

1. DIAG on FD (CF-18 XP/2000 Model)
2. DIAG on FD (CF-18 Tablet Model)
3. LAN Test
4. Modem Test
5. Wireless LAN test (Wireless LAN Model only)
6. Button Test

Q. Quit
Select please [1, 2, 3, 4, 5, 6, Q] ?

menu screen

3. LAN Test

4. Modem Test

5. Wireless LAN Test

(Wireless LAN Model only.)
This test checks for internal LAN device.
Choose LAN test and press Enter.

5 .4. Test Selection

Starting up the input menu

1. From the menu screen shown below, choose Quit and press Enter.

```
1. DIAG on FD (CF-18 XP/2000 Model)
2. DIAG on FD (CF-18 Tablet Model)
3. LAN Test
4. Modem Test
5. Wireless LAN test (Wireless LAN Model only)
6. Button Test
Q. Quit
Select please [ 1, 2, 3, 4, 5, 6, Q ] ?
```

menu screen

2. When A: \DIAG appears, input "JDG_184" and press Enter.
3. The input screen shown below will appear.
   To choose menu items, hold down "ALT" and press the selection key.

Example:
"AL T" + "F" brings up the File menu.



Input screen

Order of test flow selection

Input screen startup

↓

1. Reading the test conditions settings file
① Press "AL T" and "F".
② Press "L".
③ Press "AL T" and "C".
④

> If the test condition settings file is not read, this means the test program is not running correctly .

↓

2. setting the test items
① Press "AL T" and "S".
② Press "S".
③ Choose the test item and press Enter .
④ Choose the test whose settings are to be changed, press "A" for Additional and "R" for Erase.
All initial V Alues are "0" so set tests other than the necessary ones to "1".
⑤ Press "C" twice to return the menu screen.
⑥ To save the selected list, press "AL T" and "F" at the file menu.

> 【Saving selected test items】
> If you change the file name when saving the file in step ⑥, you can create test condition settings for custom test items.
> Example:
> CF-18 ＊＊＊ → TEST1.＊＊＊ .

↓

◆Starting the test
・Press "AL T" and "R".
・Press "R".
This will start the test.

↓

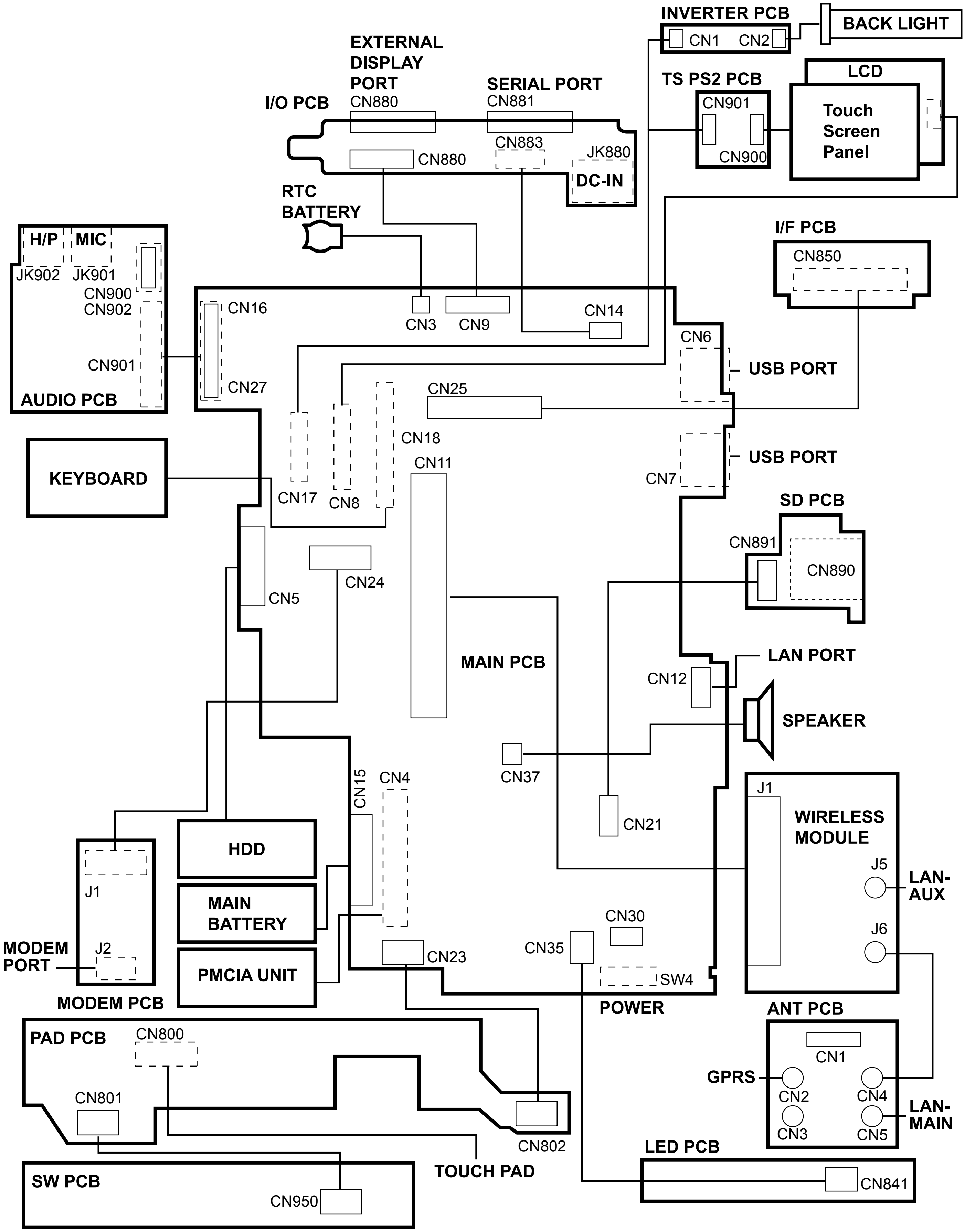
End of test

5.5. Error Messages and Troubleshooting

The table below explains the parts that may be faulty or damaged should an error message occur while performing the various test items of the self diagnostics program.

	Test classification	Screen display test items	Contents
1	CPU	A20 GATE TEST	Address 20 line
2	(CPU related)	CACHE ON/OFF	Cache memory on/off
3		NPU OPERAND TEST	Floating point processor function
4	RAM (Memory related)	RAM STANDARD	Memory standard
5	CONTROL	DMA PAGE REG TEST	DMA page register
6	(Control ICs on the	DMA REGISTER TEST	DAM register
7	main board, etc.)	DMAC Transfer TEST	DAM transfer test
8		PIC HALT INSTRUCTION TEST	Interrupt controller
9		PIC REGISTER TEST	Interrupt controller
10		RTC CMOS RAM TEST	Real time clock CMOS
11			
12		SPEAKER TEST	Speaker
13		PIT CH0 TEST	Interrupt timer CH0
14		PIT CH1 TEST	Interrupt timer CH1
15		PIT CH2 TEST	Interrupt timer CH2
16	IO	KEYBOARD REG TEST	Keyboard
17	(Input-output)	PS/2 MOUSE REG	Mouse
18	COMMUNICATION	SERIAL WRAP TEST	Serial loop back (jig required)
19		SERIAL ALL INTERNAL TEST	Serial port
20		PARALLEL REGISTER R/W	Parallel register
21	AUX	PCIC ALL TEST	PCIC
	(Auxiliary functions)	Card Bus REG	Card Bus port
		USB REG	USB port
22	VIDEO	VGA ALL TEST	VGA
23	(Display related)	SVGA RAM TEST	SVGA RAM
24		VESA MODE TEST	VESA mode
25	DISK	FD WT/RD/WP TEST	FD write/read/write protection
26	(FDD, HDD)	HDD ALL TEST	Only HDD lead selected
27	UNIQUE	ECP REGISTER R/W	Parallel port
28	(Individual functions)	EPP REGISTER R/W	Parallel port
29		EXT. CMOS R/W TEST	Extension CMOS R/W test

6 Wiring Connection Diagram



7. Disassembly/Reassembly

NOTE:

Power off the computer. Do not shut down to the Suspend or Hibernation mode.

Do not add peripherals while the computer ius in the Suspend or Hibernation mode; abnormal operation may result.

For the Screw tightening torque, please refer to [8. Exploded View].

7.1. Removing the Battery Pack and HDD Pack

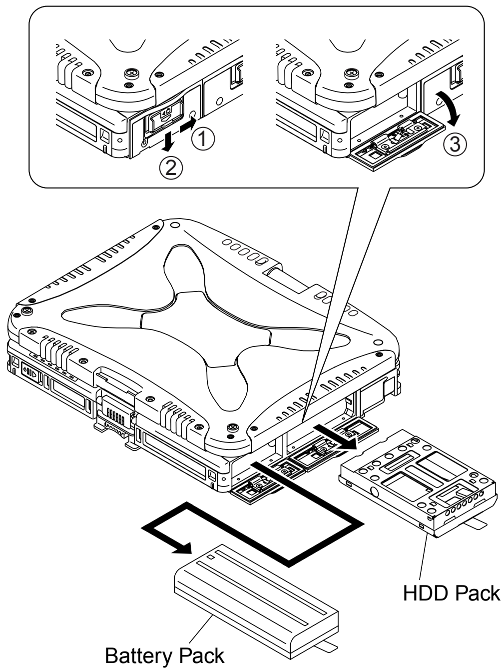


Figure 1

1. Open the Battery Cover.
2. Remove the Battery Pack.
3. Open the HDD Cover.
4. Remove the HDD Pack.

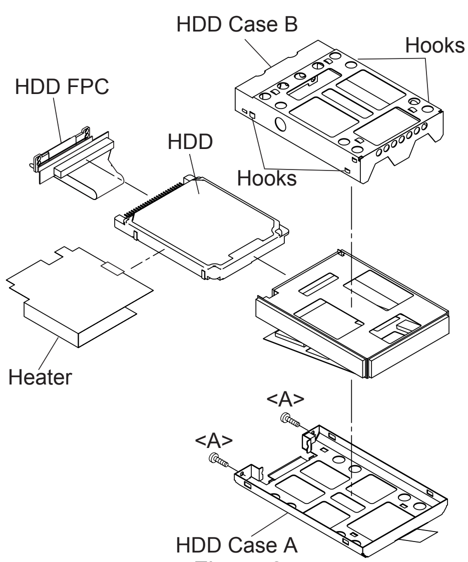


Figure 2

5. Remove the two Screws. <A>
6. Remove the HDD Case A and the HDD Case B.
7. Remove the HDD.
   Screw<A>: DFHE5025XA

7.2. Removing the Touch Pad and Keyboard

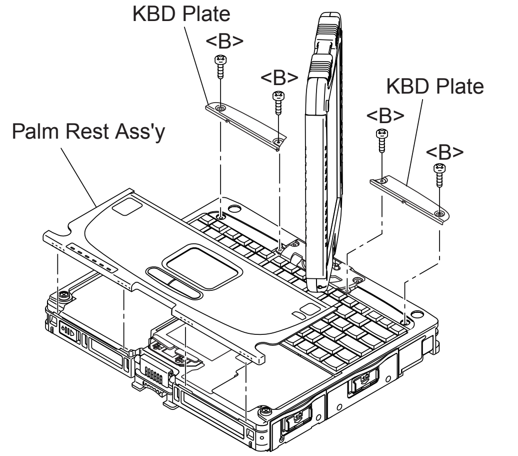


Figure 3

1. Remove the Palm Rest Assíy.
2. Remove the four Screws. <B>
3. Remove the KBD Plate.

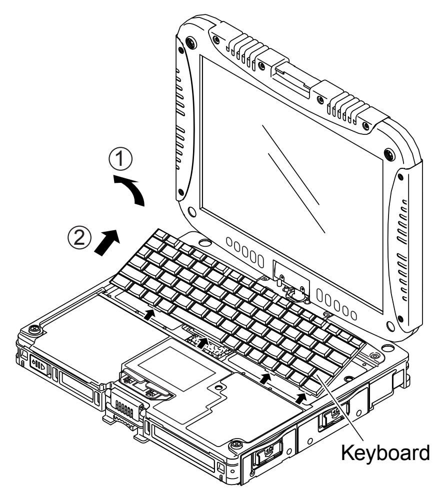


Figure 4

4. Remove the Keyboard.

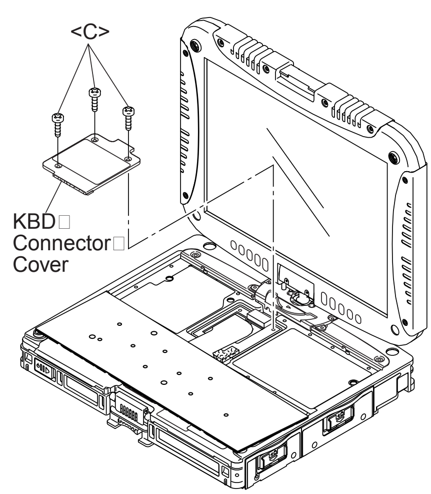


Figure 5

5. Remove the three Screws. <C>
6. Remove the KBD Connector Cover.

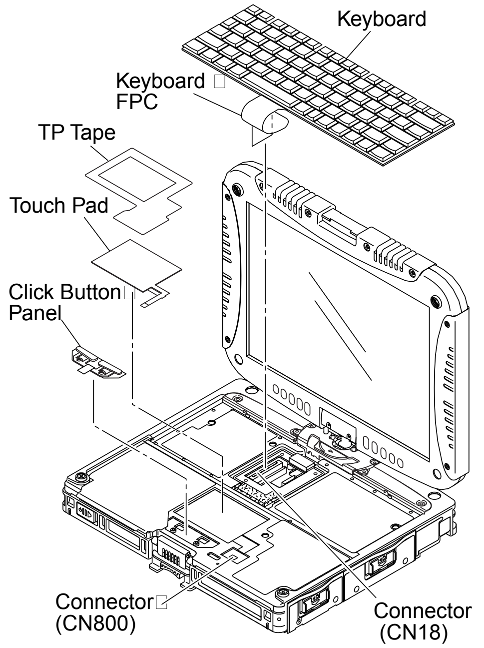


Figure 6

7. Disconnect the Cable from Connector (CN18).
8. Remove the TP Tape.
9. Disconnect the Cable from Connector (CN800).
10. Remove the Touch Pad and Click Button Plate.
    Screw<B>: DRSB2+5FKL
    <C>: DFHE5025XA

7.3. Removing the Speaker

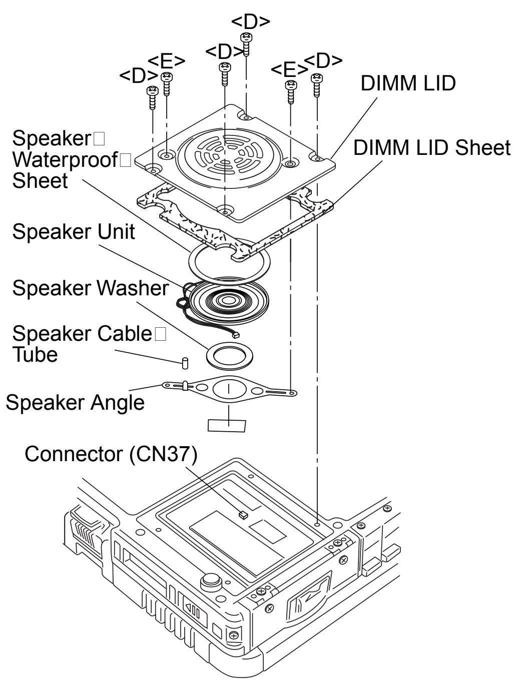


Figure 7

1. Remove the four Screws. <D>
2. Disconnect the Cable from Connector (CN37).
3. Remove the two Screws. <E>
4. Remove the Speaker Angle.
   Screw<D>: DRQT2+D2FKL
   <E>: DRHM5025YA

7.4. Removing the Rear Cabinet

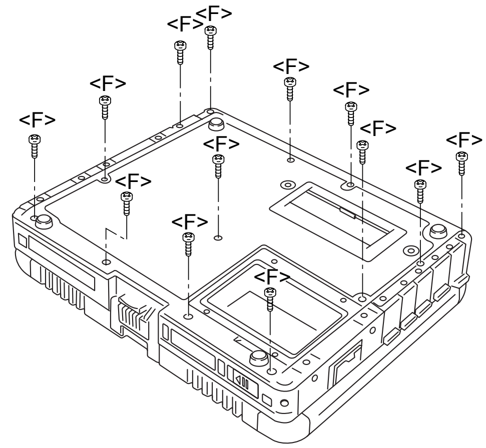


Figure 8

1. Remove the thirteen Screws. <F>
2. Remove the Rear Cabinet.
   Screw<F>: DRHM0061ZA

7.5. Removing the DU Lid Unit

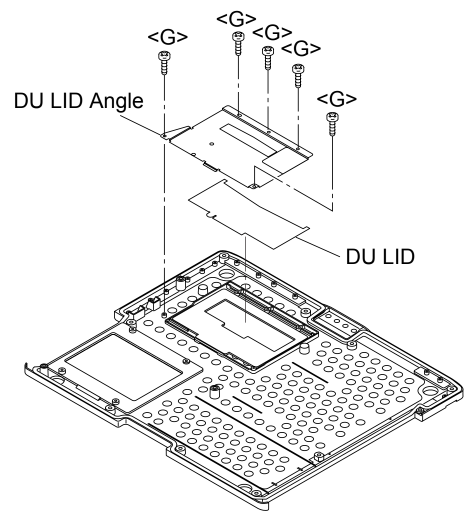


Figure 9

1. Remove the five Screws. <G>
2. Remove the DU Lid Angle and DU Lid.
   Screw<G>: DRHM5025YA

7.6. Removing the Audio PCB

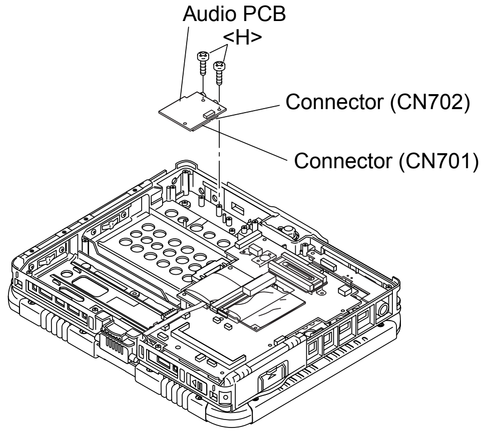


Figure 10

1. Remove the two Screws. <H>
2. Disconnect the two Cables from two Connectors (CN701, CN702).
3. Remove the Audio PCB.
   Screw<H>: DRSB2+5FKL

7.7. Removing the Wireless Module, Port PCB and Modem PCB

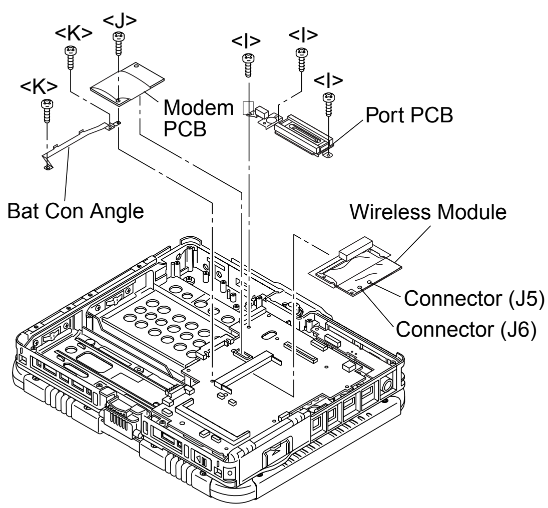


Figure 11

1. Disconnect the two Antenna Cables from two Connectors (J5, J6).
2. Remove the Wireless Module.
3. Remove the three Screws. <I>
4. Remove the Port PCB.
5. Remove the Screw. <J>
6. Remove the Modem PCB.
7. Remove the two Screws. <K>
8. Remove the BAT CON angle.
   Screw<I>: DRSB2+5FKL
   <J>: XSB2+4FNL
   <K>: DRSB2+5FKL

7.8. Removing Main PCB

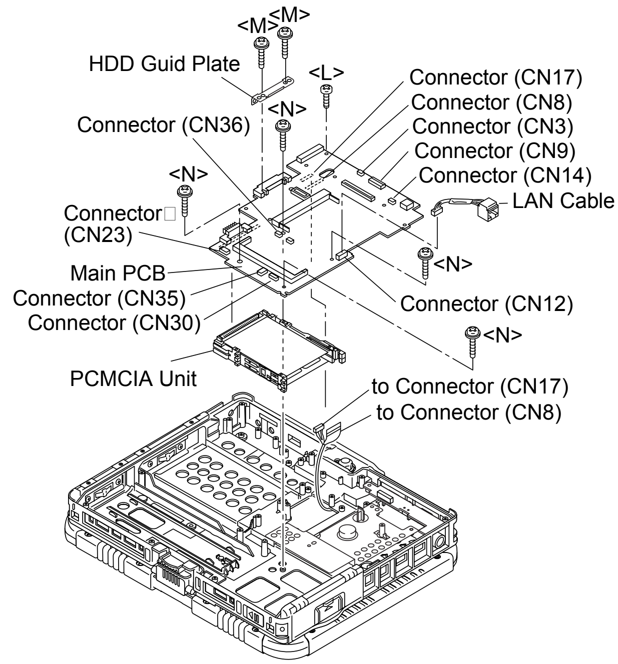


Figure 12

1. Disconnect the eight Cables from eight Connectors (CN3, CN9, CN12, CN14, CN23, CN30, CN35, CN36).
2. Remove the Screw. <L>
3. Remove the two Screws. <M>
4. Remove the four Screws. <N>
5. Remove the Main PCB.
6. Disconnect the two Cables from two Connectors (CN8, CN17).
7. Remove the PCMCIA Unit.
   Screw<L>: DRSB2+5FZL
   <M>: DXYN2+J12FNL
   <N>: DXYN2+J18FN

7.9. Removing PAD PCB and I/O PCB

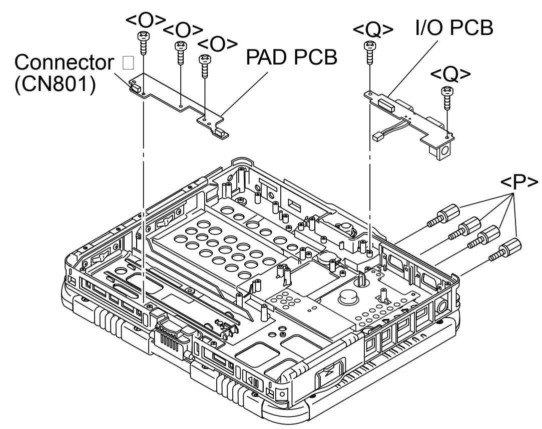


Figure 13

1. Disconnect the Cable from Connector (CN801).
2. Remove the three Screws. <O>
3. Remove the PAD PCB.
4. Remove the four Screws. <P>
5. Remove the two Screws. <Q>

6. Remove the I/O PCB.
   Screw<O>: DFHE5025XA
   <P>: DFHE5058ZB
   <Q>: DRSB2+5FKL

7.10. Removing LED PCB and Switch PCB

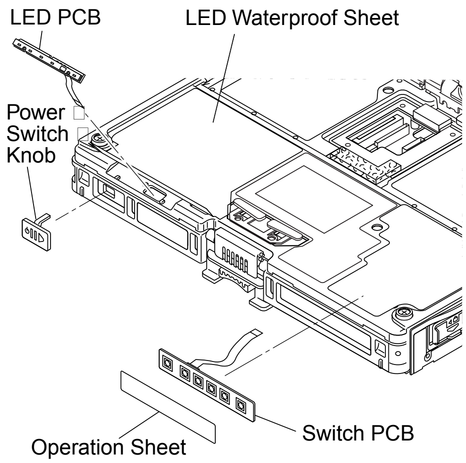


Figure 14

1. Remove the LED Waterproof Sheet.
2. Remove the LED PCB.
3. Remove the Switch PCB.
4. Remove the Power Switch.

7.11. Removing the CPU Heat Plate and Lithium Battery

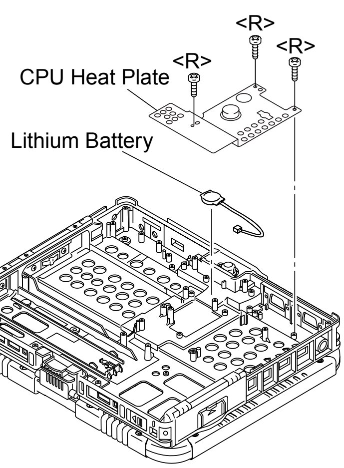


Figure 15

1. Remove the three Screws. <R>
2. Remove the CPU Heat Plate.
3. Remove the Lithium Battery.
   Screw<R>: DFHE5025XA

7.12. Removing the Display unit

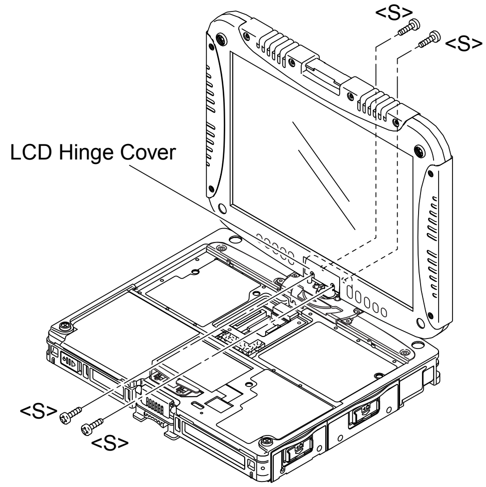


Figure 16

1. Remove the four Screws. <S>
2. Remove the LCD Hinge Cover.

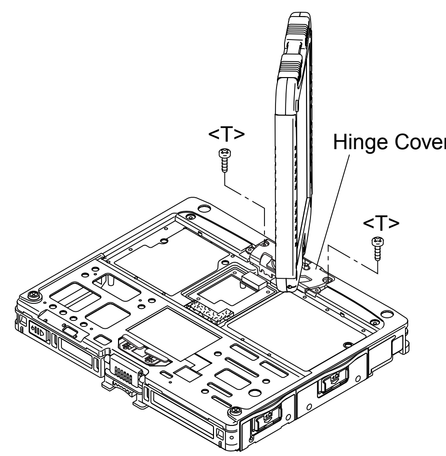


Figure 17

3. LCD is half-rotated. Removes the two Screws. <T>
4. Remove the Hinge Cover.

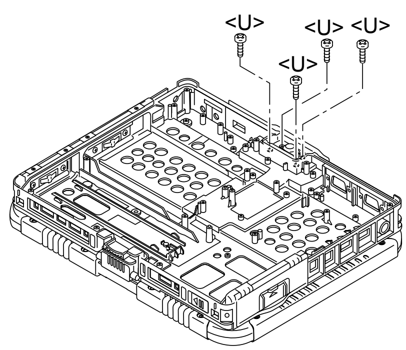


Figure 18

5. Remove the four Screws. <U>
6. Remove the Display Unit.
   Screw<S>: DFHE5025XA
   <T>: DRSB2+5FKL
   <U>: DXYN4+J8FNL

7.13. Removing Antenna Cover, Tablet Latch Cover and LCD Rear Case

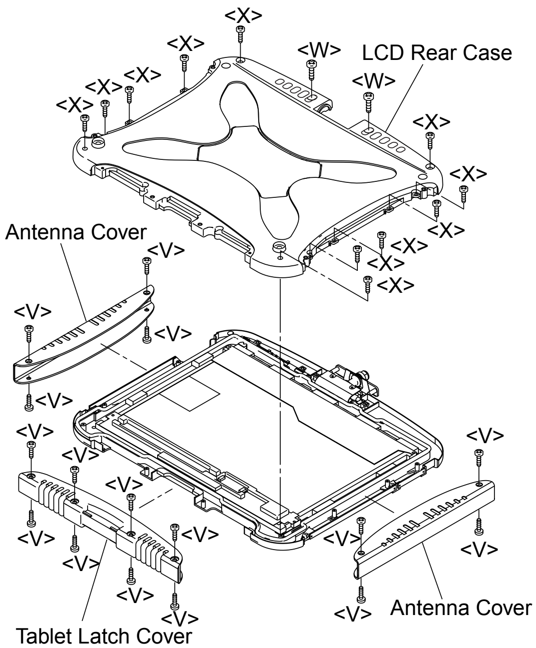


Figure 19

1. Remove the sixteen Screws. <V>
2. Remove Antenna Cover and Tablet Latch Cover.
3. Remove the two Screws. <W>
4. Remove the eleven Screws. <X>
5. Remove the LCD Rear Case.
   Screw<V>: DRQT26+D5FKL
   <W>: DXYN3+J10FNL
   <X>: DXYN2+J6FNL

7.14. Removing the LCD Hinge

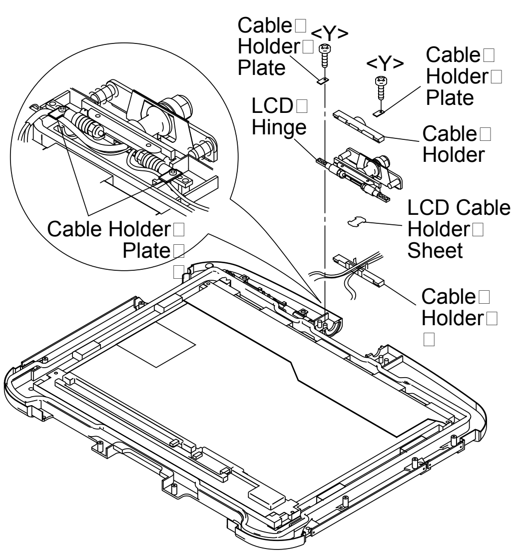


Figure 20

1. Remove the two Screws. <Y>
2. Remove the Cable Holder Plate and LCD Hinge.
3. Remove the Cable Holder.
4. Remove the Cable Holder sheet.
   Screw<Y>: DXYN3+J8FNL

7.15. Removing Inverter PCB

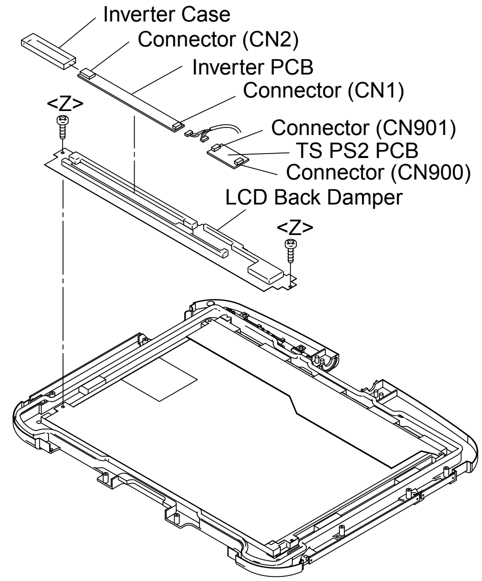


Figure 21

1. Disconnect the two Cables from two Connectors (CN1, CN2).
2. Remove the Inverter Case and Inverter PCB.
3. Remove the two Screws. <Z>
4. Remove the LCD Rear Damper.
   Screw<Z>: DXHM0042ZA

7.16. Removing GPRS Antenna PCB, LAN1-BT PCB, LAN2-BT PCB and Pen Holder

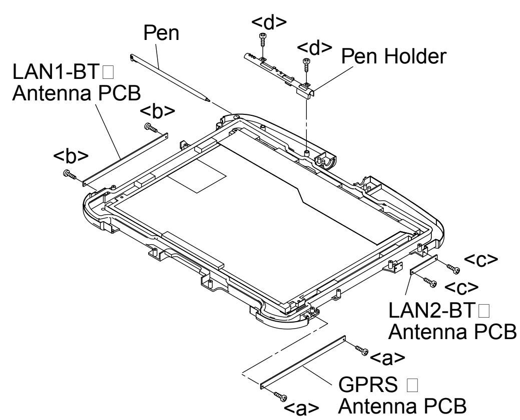


Figure 22

1. Remove the two Screws. <a>
2. Remove the GPRS Antenna PCB.
3. Remove the two Screws. <b>
4. Remove the LAN1-BT Antenna PCB.
5. Remove the two Screws. <c>
6. Remove the LAN2 Antenna PCB.
7. Remove the Pen.
8. Remove the two Screws. <d>
9. Remove the Pen Holder.
   Screw<a><b><c>: DFHE5025XA
   <d>: DRHM5025YA

7.17. Removing Each Cover

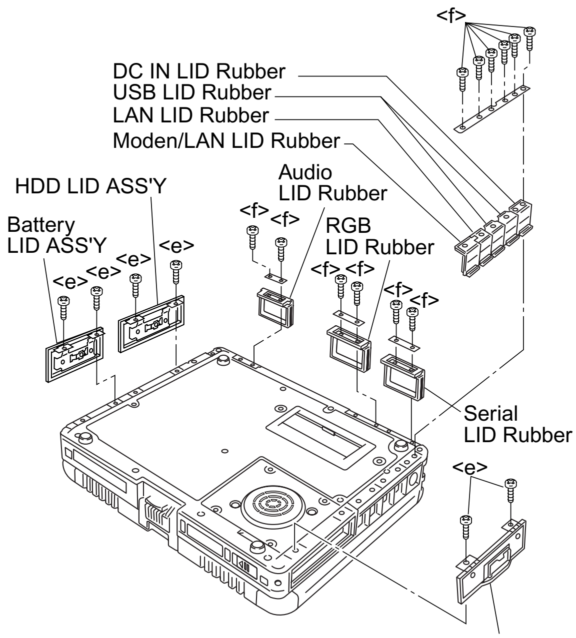
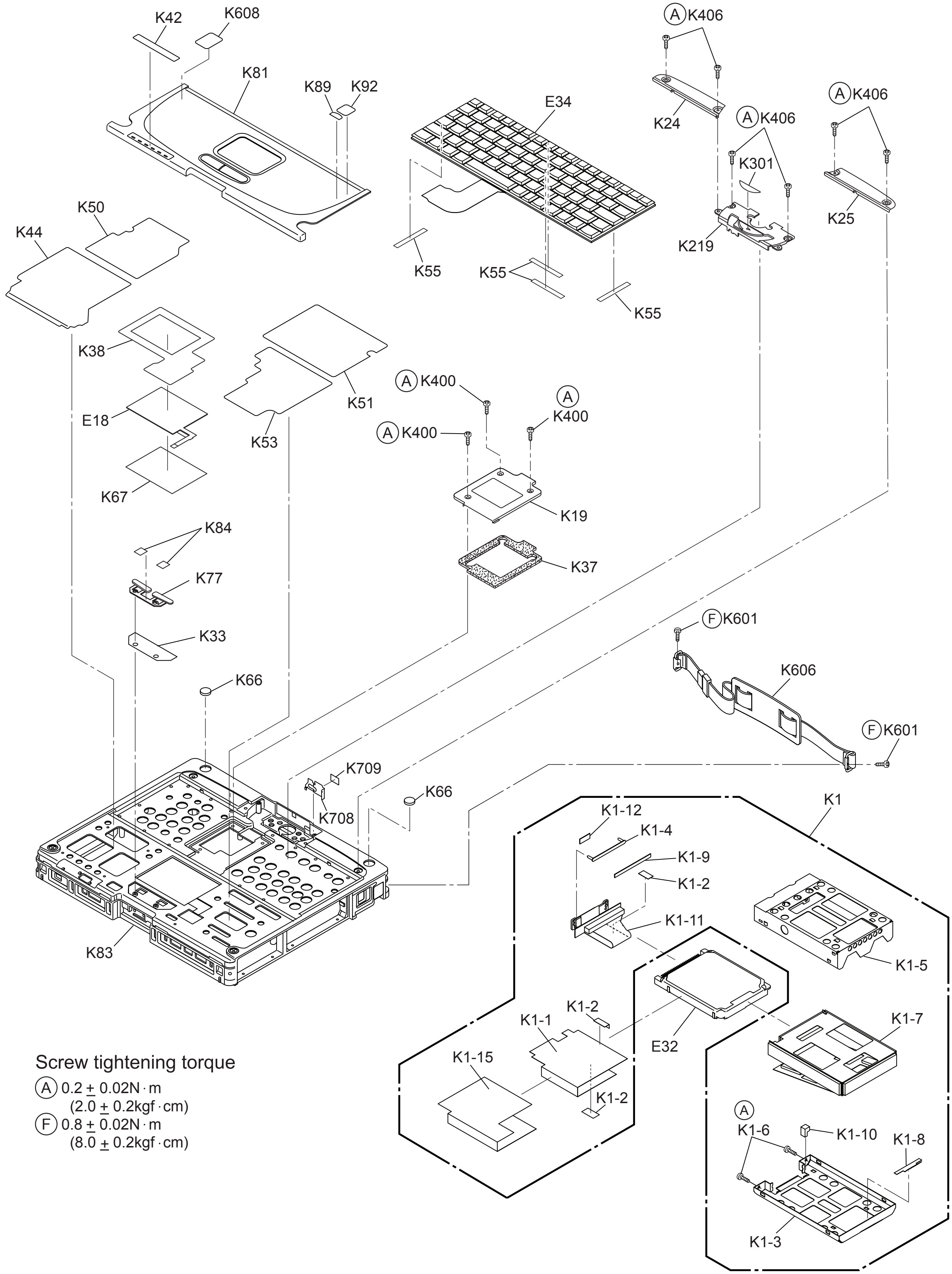


Figure 23

1. Remove the six Screws. <e>
2. Remove the Battery LID ASS'Y, HDD LID ASS'Y and PCMCIA LID ASS'Y.
3. Remove the twelve Screws. <f>
4. Remove the Moden/LAN LID Rubber, LAN LID Rubber, USB LID Rubber, DC IN LID Rubber, Serial LID Rubber, RGB LID Rubber and Audio LID Rubber.
   Screw<e>: DRQT26+D3ZKL
   <f>: DRHM5025YA

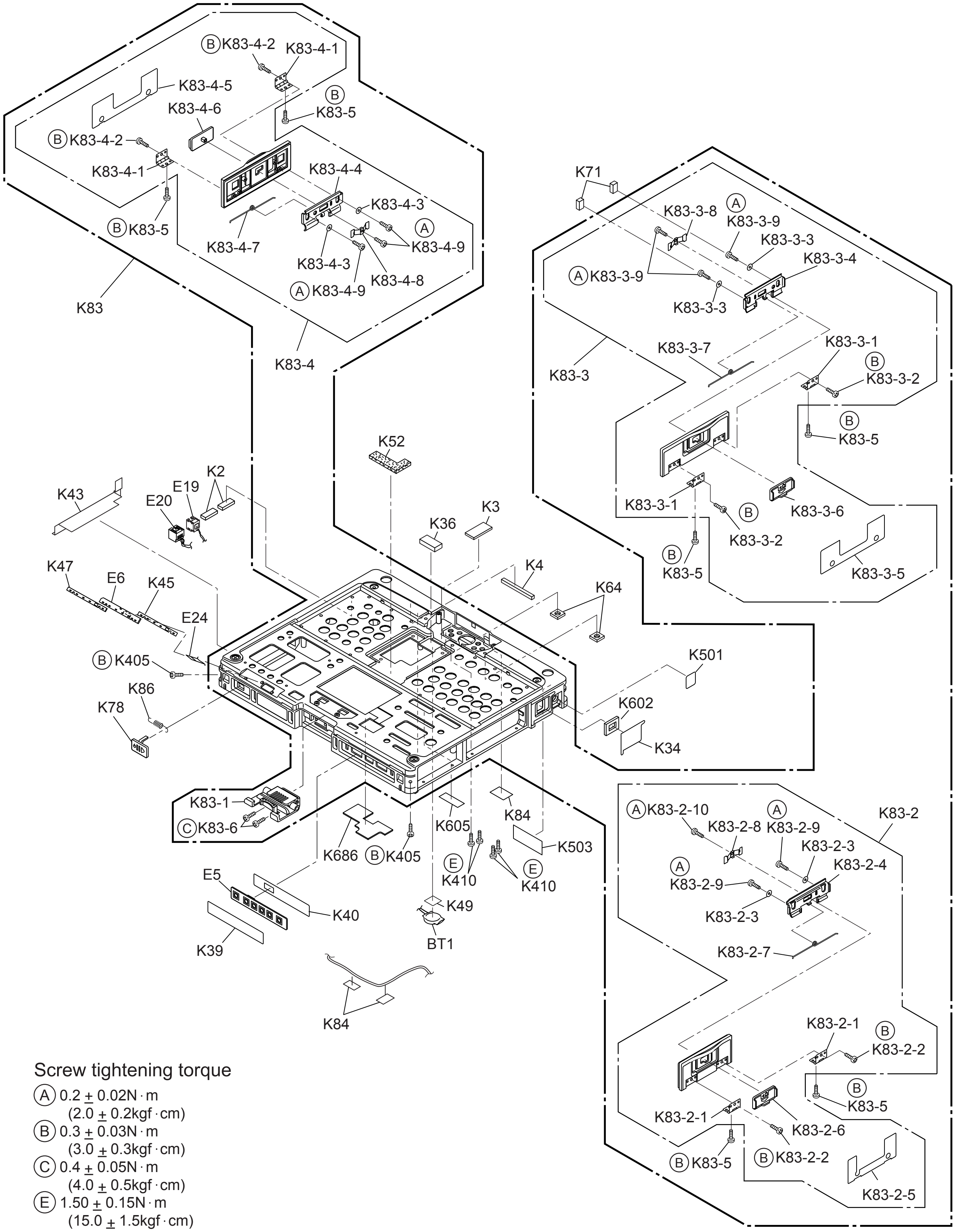
8 Exploded View



Screw tightening torque

(A) 0.2 ± 0.02N · m
(2.0 ± 0.2kgf · cm)

(F) 0.8 ± 0.02N · m
(8.0 ± 0.2kgf · cm)



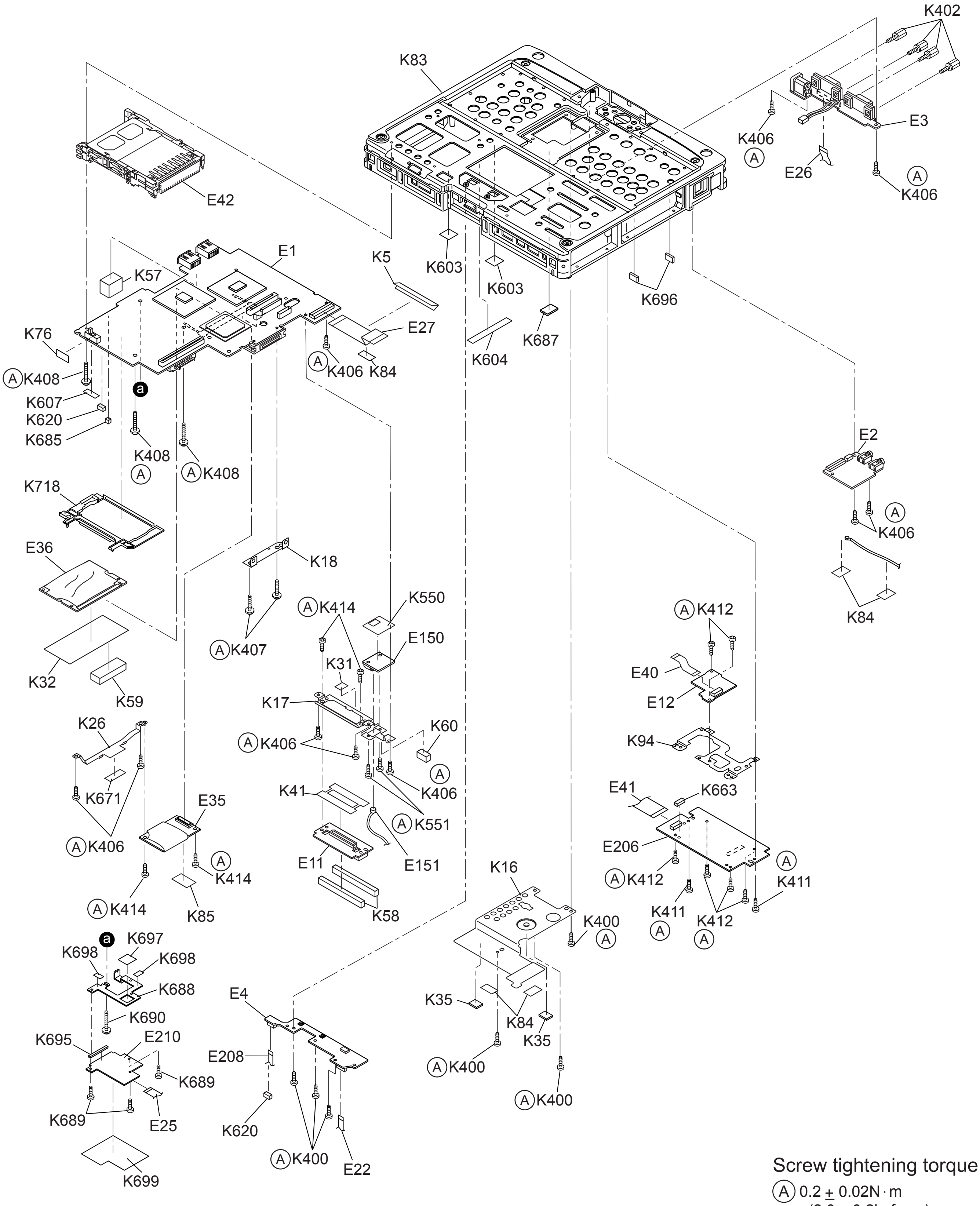
Screw tightening torque

Ⓐ 0.2 ± 0.02N · m
(2.0 ± 0.2kgf · cm)

Ⓑ 0.3 ± 0.03N · m
(3.0 ± 0.3kgf · cm)

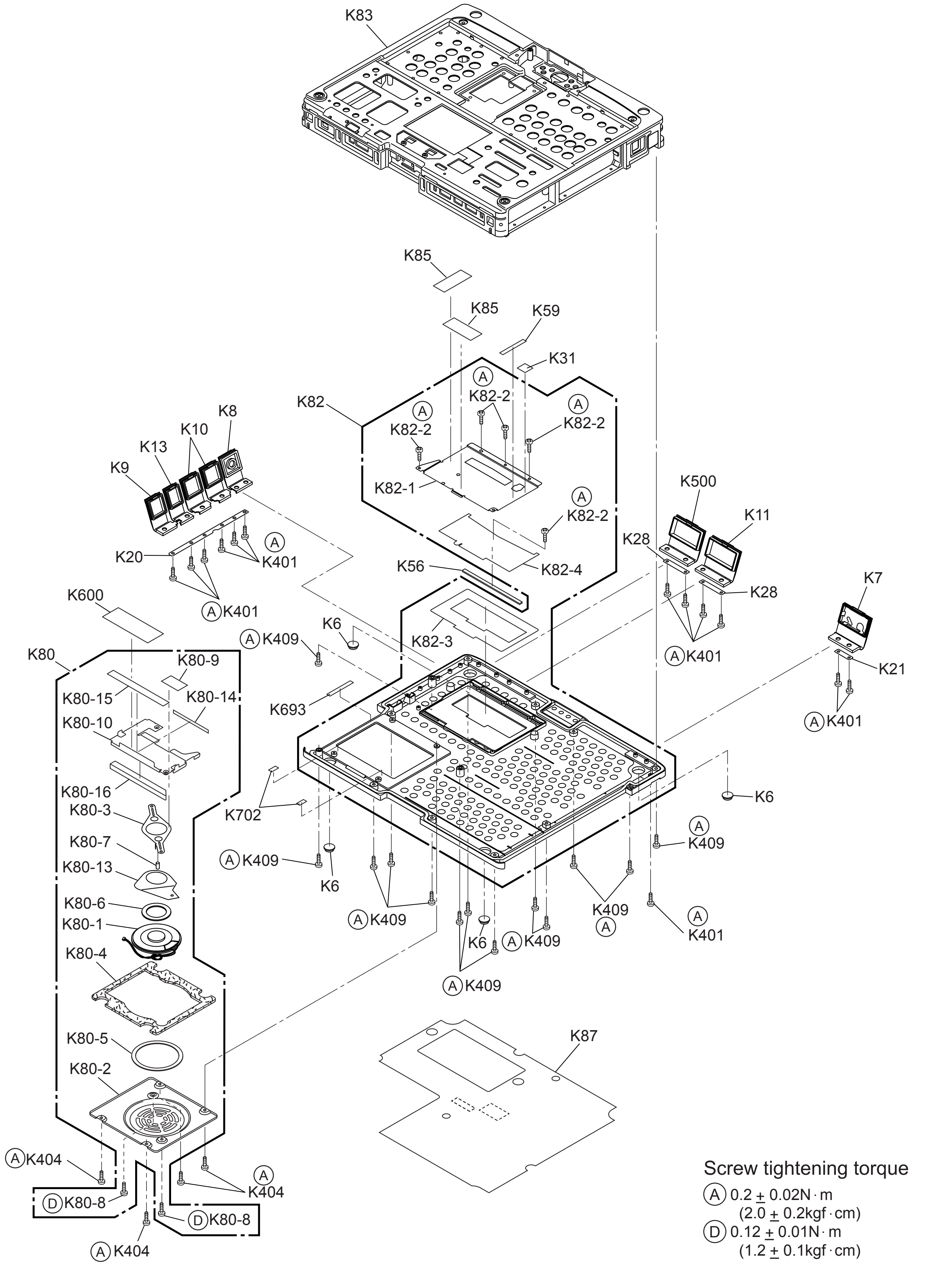
Ⓒ 0.4 ± 0.05N · m
(4.0 ± 0.5kgf · cm)

Ⓔ 1.50 ± 0.15N · m
(15.0 ± 1.5kgf · cm)



Screw tightening torque

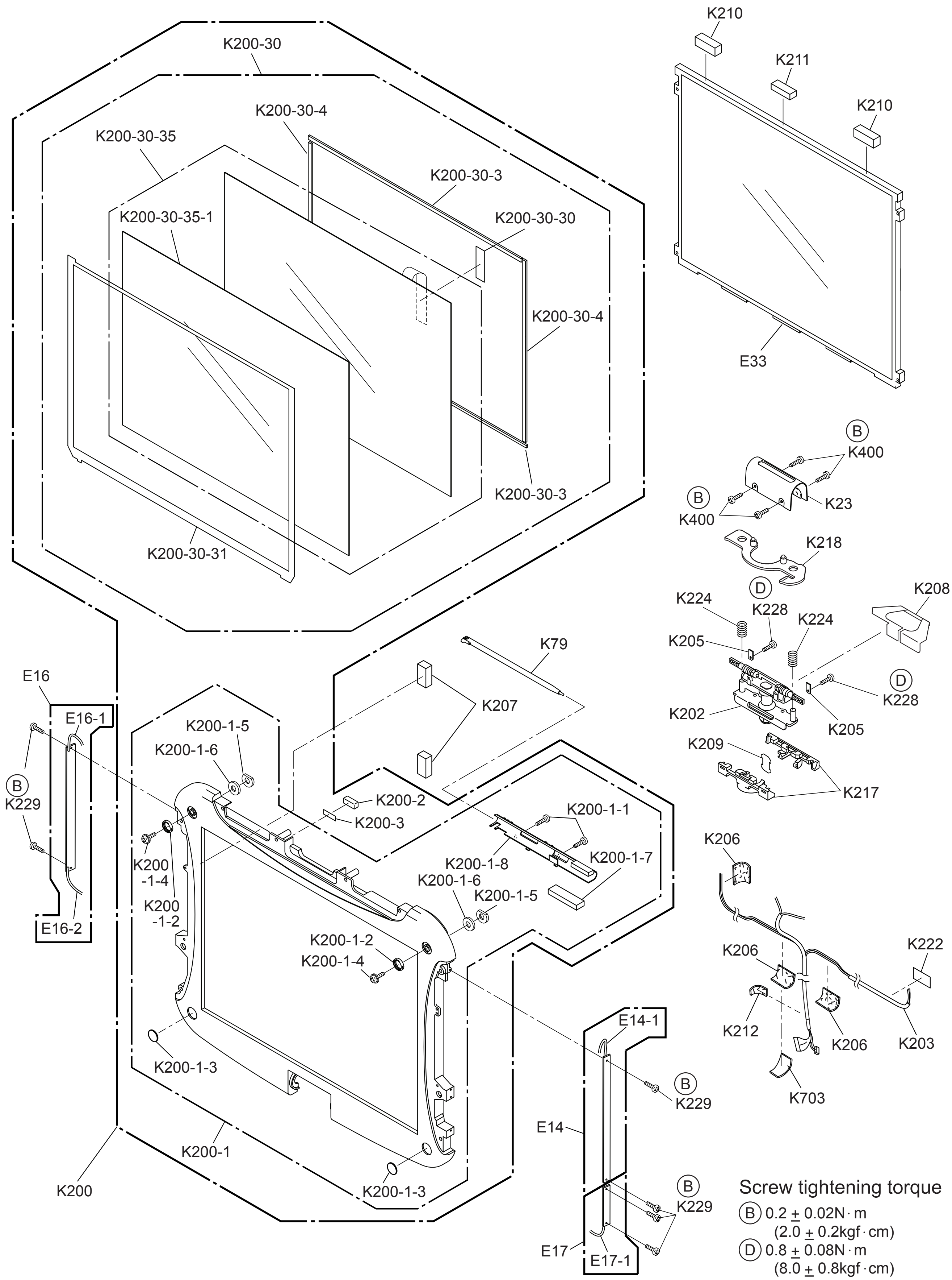
Ⓐ 0.2 ± 0.02N·m
(2.0 ± 0.2kgf·cm)



Screw tightening torque

(A) 0.2 ± 0.02N · m
(2.0 ± 0.2kgf · cm)

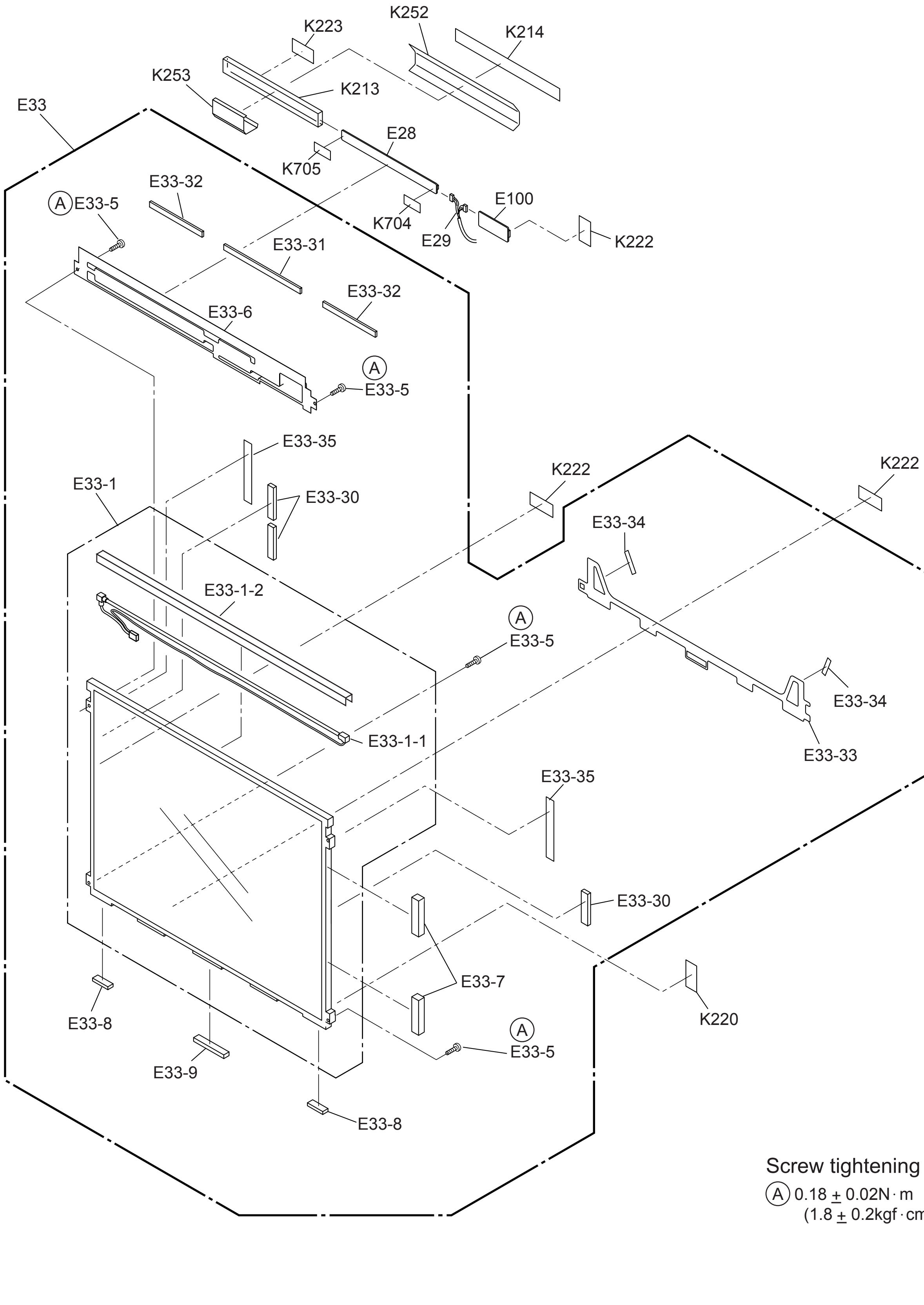
(D) 0.12 ± 0.01N · m
(1.2 ± 0.1kgf · cm)



Screw tightening torque

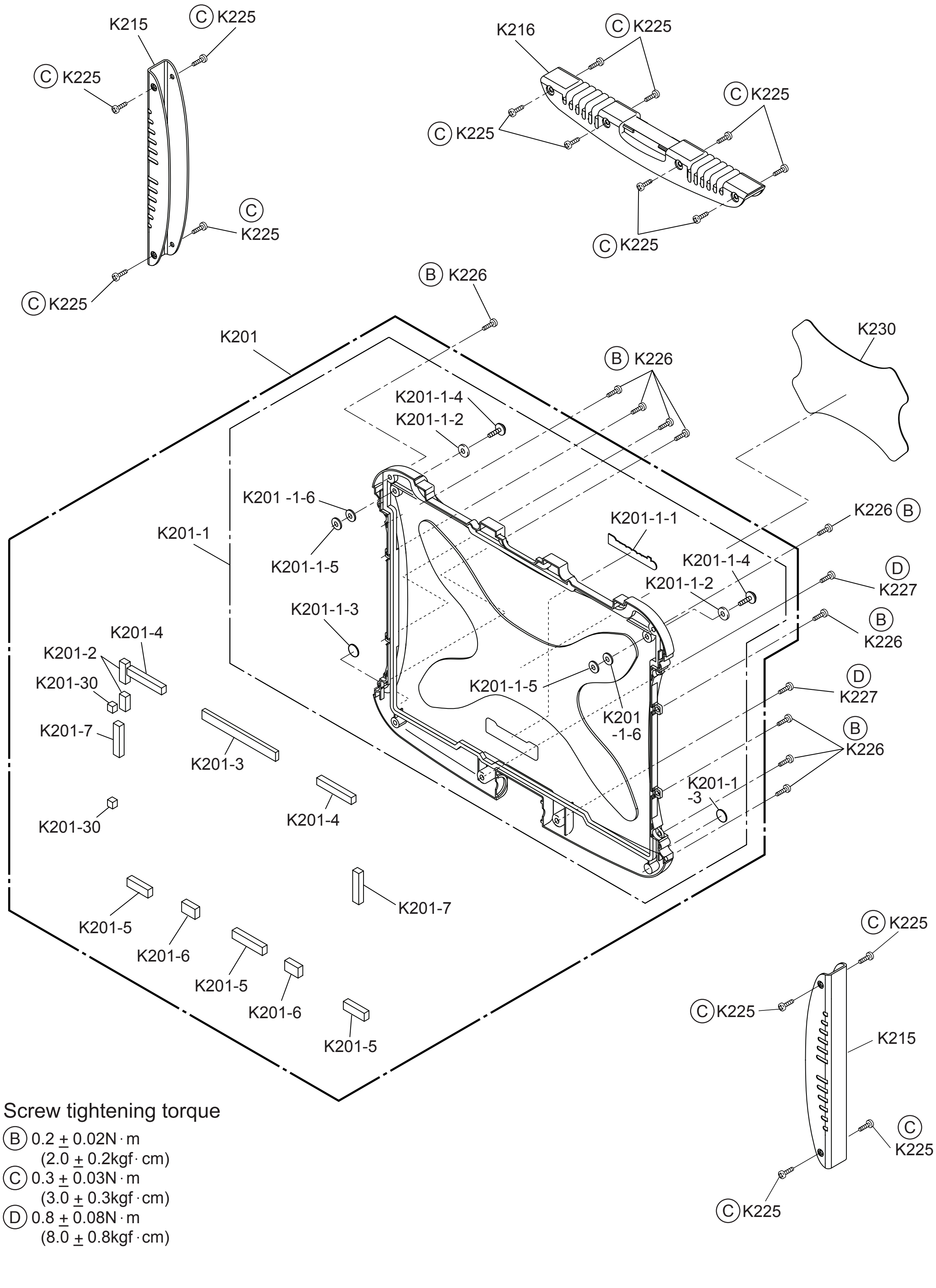
B 0.2 ± 0.02N · m
(2.0 ± 0.2kgf · cm)

D 0.8 ± 0.08N · m
(8.0 ± 0.8kgf · cm)



Screw tightening torque

Ⓐ 0.18 ± 0.02N · m
(1.8 ± 0.2kgf · cm)



Screw tightening torque

B 0.2 $\pm$ 0.02N·m
(2.0 $\pm$ 0.2kgf·cm)

C 0.3 $\pm$ 0.03N·m
(3.0 $\pm$ 0.3kgf·cm)

D 0.8 $\pm$ 0.08N·m
(8.0 $\pm$ 0.8kgf·cm)

9 Replacement Parts List

Note: Important Safety Notice
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

CF-18JHU70TW

REF.NO. and AREA		PART NO.	DESCRIPTION		Q'TY
Main Block Unit					
BT1	⚠	CR2032/S5W	RTC BATTERY		1
CN6		K1FB104B0055	CONNECTOR, USB PORT		1
CN7		K1FB104B0055	CONNECTOR, USB PORT		1
CN881		K1FA209BA004	CONNECTOR, EXTERNAL DISPLAY PORT		1
CN882		K1FB115BA014	CONNECTOR, SERIAL PORT		1
CN890		K1NA09E00076	CONNECTOR, SD SLOT		1
F1	⚠	K5H502Z00003	FUSE, 5A		1
F2 3 4 6	⚠	K5H202Z00005	FUSE, 2A		4
JK880		K2EZ2B000046	JACK, DC-IN		1
JK901		K2HC103B0197	JACK, MICROPHONE		1
JK902		K2HC103B0197	JACK, HEADPHONE		1
SW1		K0D112A00096	SWITCH, POWER		1
E1		DL3U1B471AAA	PCB, MAIN	RTL	1
E2		DL3U2B471AAA	PCB, AUDIO	RTL	1
E3		DL3U3B471AAA	PCB, I/O	RTL	1
E4		DL3U1B482AAA	PCB, PAD	RTL	1
E5		DL3U2B482AAA	PCB, SWITCH	RTL	1
E6		DL3U3B482AAA	PCB, LED	RTL	1
E11		DL3U4B482AAA	PCB, PORT	RTL	1
E12		DL3UPB237HAA	PCB, BLUETOOTH	RTL	1
E14		DL3U11283CAA	PCB, WIDE AREA ANTENNA	RTL	1
E14-1		DFJS873YA	GPRS CABLE, GRAY		1
E16		DL3U31283CAA	PCB, BT-LAN2 ANTENNA	RTL	1
E16-1		DFJS837YA	LAN MAIN CABLE, BLACK		1
E16-2		DFJS835YA	BT CABLE, BLUE		1
E17		DL3U41283CAA	PCB, LAN2 ANTENNA	RTL	1
E17-1		DFJS836YA	LAN SUB CABLE, WHITE		1
E18		N2EABEC00006	TOUCH PAD		1
E19		DFJS827YA	CABLE, MODEM		1
E20		DFJS828YA	CABLE, LAN		1
E22		DFJK08T024DB	FFC, SW		1
E24		DFJK10T053DB	FFC, LED		1
E25		DFJK12T034DB	FFC, PAD		1
E26		DFJK24T034DB	FFC, IO		1
E27		DFJK40T072CB	FFC, AUDIO		1
E28	⚠	N0GB1J000018	INVERTER		1
E29		DFJS923YA	CABLE, LCD TS		1
E32		N3CAYYY00001	HDD		1
E33		DFWV08A0076	LCD UNIT ASS'Y		1
E33-1		DL3DW0180AAA	LCD ASS'Y		1
E33-1-1		A2CA00000056	LCD BACKLIGHT, CCFL		1
E33-1-2		DFHM0290ZA	REFLECTION ANGLE		1
E33-5		DXHM0042ZA	SCREW		4
E33-6		DFHR3C08ZA	LCD BACK DAMPER		1
E33-7		DFHR3B64ZA	LCD SIDE CUSHION A		2
E33-8		DFHR3506YA	LCD SIDE CUSHION C		2
E33-9		DFHR3507YA	LCD SIDE CUSHION D		1

E33-30	DFHR3453YA	LCD BACK CUSHION SIDE	3
E33-31	DFHR3570YA	LCD BACK CUSHION	1
E33-32	DFHR3571YA	LCD BACK CUSHION S	2
E33-33	DFHR3612ZA	LCD PWB SPACER	1
E33-34	DFHR3647YA	SPACER SHEET	2
E33-35	DFHR3648ZA	HOLDER SHEET B	2
E34	N2ABAJ000003	KEYBOARD, JP	1
E35	N5HAZ0000013	MDC MODEM	1
E36	N5HZC0000013	WIRELESS LAN MODULE	1
E40	DFJK12U043DB	FFC, BT	1
E41	DFJK50T038DB	FFC, RF	1
E42	K1YYZZ000058	CARD BUS SOCKET	1
E100	DL3U5B482AAA	PCB, TS PS2 RTL	1
E150	DL3UP1282AAA	PCB, ANTENNA RTL	1
E151	DFJS877YA	CABLE, ANTENNA	1
E206	DL3UPB281HBA	PCB, RF-BT RTL	1
E208	DFJK13T024DB	FFC, PAD	1
E210	DL3U7B482AAA	PCB, SD RTL	1
Accessories			
A1 ⚠	CF-AA1625AM4	AC ADAPTOR	1
A2 ⚠	K2CA29A00013	AC CABLE	1
A3 ⚠	DFJN5248ZA	MANUAL, CD-ROM	1
A4 ⚠	CGR-B/6D8A	BATTERY PACK	1
A7	DFHS9017ZA	CLOTH ASS'Y	1
A25	DFQC9006ZB-0	SHOULDER BELT ASS'Y	1
A26	DFME0134ZA	TETHER	1
A34	DFJS981ZA	USB CABLE	1
A35	UJSJDYZ2391X	DVD-ROM & CD-R/RW DRIVE	1
A36	UJSJDLW060Z2	IF CABLE K	1
Packing Material			
P1	DFPK1147SA	CASE, PACKING	1
P3	DFPE0733YA	ACCESSORIES BOX	1
P4	DFPE0823ZA	ACCESSORY FIXED	1
Mechanical Parts			
K1	DFWV99A0106	HDD MOUNTING KIT	1
K1-1	L9DZAA000004	HEATER	1
K1-2	DFMX0383TA	INSULATION SHEET	3
K1-3	DFHM0280YA	HDD CASE A	1
K1-4	DFHM0313ZA	MDD GUIDE PIN PLATE	1
K1-5	DFHM9007ZA	HDD CASE B	1
K1-6	DFHE5025XA	SCREW	2
K1-7	DFHR3443XA	HDD DAMPER	1
K1-8	DFHR3589ZA	HDD CASE TAB	1
K1-9	DFHR3601ZA	HDD GUIDE PLATE SPACER	1
K1-10	DFHR3627YA	HDD CUSHION SPACER	1
K1-11	DL3UP1279BAA	FPC ASS'Y, HDD	1
K1-12	DFHP7124ZA	TAPE	1
K1-15	DFMX1207ZA	INSULATION SHEET, HDD HEATER	1
K2	DFHE0326XA	GASKET	2
K3	DFHE0519XA	GASKET E	1
K4	DFHE0811YA	GASKET	1
K5	DFHE0815ZA	CONDUCTIVE SHEET	1
K6	DFHG1209ZA	RUBBER, FOOT	4
K7	DFHG1630ZA-0	AUDIO LID RUBBER	1
K8	DFHG1632XA-0	DC IN LID RUBBER	1
K9	DFHG1638ZA-0	MODEM/LAN LID RUBBER	1

K10	DFHG1639ZA-0	USB LID RUBBER	2
K11	DFHG1641ZB-0	RGB LID RUBBER	1
K13	DFHG1660ZA-0	LAN LID RUBBER	1
K16	DFHM0379ZA	CPU HEAT PLATE	1
K17	DFHM0276SA	DU CNT ANGLE	1
K18	DFHM0282YA	HDD GUIDE PLATE ASM	1
K19	DFHM0284XA	KB CNT LID	1
K20	DFHM0286YB	LID RUBBER PLATE A	1
K21	DFHM0288ZB	LID RUBBER PLATE C	1
K23	DFHM0296XA-0	LCD HINGE COVER	1
K24	DFHM0302YA-0	KBD PLATE (L)	1
K25	DFHM0303YA-0	KBD PLATE (R)	1
K26	DFHM0307YA	BAT CON ANGLE	1
K28	DFHM0311ZB	LID RUBBER PLATE B	2
K31	DFHR3262ZA	MODEM TAPE	2
K32	DFHR3301YA	MINI PCI CARD SHEET	1
K33	DFHR3438ZA	CLICK BUTTON SHEET	1
K34	DFHR3808ZA	GPS HOLE SHEET	1
K35	DFHR3445YA	HEAT DISSIPATION RUBBER	2
K36	DFHR3450ZA	KB CNT HOLE CUSHION	1
K37	DFHR3451ZB	KB CNT LID SHEET	1
K38	DFHR3474YA	TP TAPE	1
K39	DFHR3483SA	OPERATION SHEET	1
K40	DFHR3485ZA	OPERATION TAPE	1
K41	DFHR3487ZA	PORTRE SHEET	1
K42	DFHR3510ZA	LED SHEET	1
K43	DFHR3B11YA	SHEET, PCMCIA	1
K44	DFHR3512ZA	LED WATERPROOF SHEET	1
K45	DFHR3513ZA	LED PWB TAPE	1
K47	DFHR3536YA	LED LIGHT GUIDE SHEET	1
K49	DFHR3551YA	COIN BATTERY SHEET	1
K50	DFHR3581YA	KBD WATERPROOF SHEET L	1
K51	DFHR3582ZA	KBD WATERPROOF SHEET R	1
K52	DFHR3583ZA	KBD WATERPROOF SHEET C	1
K53	DFHR3584ZA	PALMREST SHEET R	1
K55	DFHP7106YA	TAPE	4
K56	DFHR3622ZA-0	DU STOPPER	1
K57	DFHR3623ZA	DU STOPPER A	1
K58	DFHR3624ZA	DU STOPPER B	2
K59	DFHR3625ZA	DU STOPPER C	2
K60	DFHR3626ZA	DU STOPPER D	1
K64	DFHR3636ZA	CABLE HOLD SHEET	2
K66	DFHR3642YA	LCD CUSHION SHEET	2
K67	DFHR3643ZA	TP BOTTOM TAPE	1
K71	DFHR3655YA	HDD CASE SPACER	2
K76	DFHR3677ZA	INSULATION SHEET	1
K77	DFHR6044XA	CLICK BUTTON PLATE	1
K78	DFHR6052XB-0	POWER SW KNOB	1
K79	DFHR9081ZA	PEN	1
K80	DFKE9078YA-0	DIMM LID ASSY SD	1
K80-1	L0AA04A00022	SPEAKER UNIT	1
K80-2	DFHM0275ZB	DIMM LID	1
K80-3	DFHM0298YA	SPEAKER ANGLE	1
K80-4	DFHR3439ZA	DIMM LID SHEET	1
K80-5	DFHR3471ZA	SP WATERPROOF SHEET	1
K80-6	DFHR3520ZA	SPEAKER WASHER	1

K80-7	DFHR3535ZA	SPEAKER CABLE TUBE	1
K80-8	DRHM5025YA	SCREW	2
K80-9	DFMX1070ZA	FDD INSULATION SHEET (2)	1
K80-10	DFHM0377YA	DIMM HEAT SINK PLATE	1
K80-13	DFMX1197ZA	SPEAKER INSULATION SHEET	1
K80-14	DFHR3C04ZA	DIMM CARD INSULATION SHEET	1
K80-15	DFHR3C05ZA	DIMM TIP INSULATION SHEET	1
K80-16	DFHR8509ZA	DIMM PLATE SPACER	1
K81	DFKE9065WA-0	PALM REST ASS'Y	1
K82	DFKM9030ZA-0	BOTTOM CASE ASS'Y	1
K82-1	DFHM0277YA	DU LID ANGLE	1
K82-2	DRHM5025YA	SCREW	5
K82-3	DFHR3441ZA	DU LID WATERPROOF SHEET	1
K82-4	DFHR6045ZA	DU LID	1
K83	DFKM9033WD-0	TOP CASE ASS'Y	1
K83-1	DFKE9073YA-0	TABLET LATCH ASS'Y	1
K83-2	DFKE9071ZA-0	BATT LID ASS'Y	1
K83-2-1	DFBH3030ZA	LID HINGE	2
K83-2-2	DRQT26+D3FKL	SCREW	2
K83-2-3	DFHM0310YA	WASHER	2
K83-2-4	DFHM0315YC	LID LATCH PLATE BATT	1
K83-2-5	DFHR3509YA	BAT COVER SHEET	1
K83-2-6	DFKE0799ZA-0	TABLE LATCH KNOB	1
K83-2-7	DFUN0068XA	LID KNOB SPRING	1
K83-2-8	DFUS0292ZB	LID KNOB SPRING PLATE	1
K83-2-9	DRHM5025YA	SCREW	2
K83-2-10	DXQT2+F3FNLT	SCREW	1
K83-3	DFKE9072ZB-0	HDD LID ASS'Y	1
K83-3-1	DFBH3030ZA	LID HINGE	2
K83-3-2	DRQT26+D3FKL	SCREW	2
K83-3-3	DFHM0310YA	WASHER	2
K83-3-4	DFHM0285XC	LID LATCH PLATE	1
K83-3-5	DFHR3508YA-0	HDD COVER SHEET	1
K83-3-6	DFKE0799ZA-0	TABLE LATCH KNOB	1
K83-3-7	DFUN0068XA	LID KNOB SPRING	1
K83-3-8	DFUS0292ZB	LID KNOB SPRING PLATE	1
K83-3-9	DRHM5025YA	SCREW	3
K83-4	DFKE9075XA-0	PCMCIA LID ASS'Y	1
K83-4-1	DFBH3030ZA	LID HINGE	2
K83-4-2	DRQT26+D3FKL	SCREW	2
K83-4-3	DFHM0310YA	WASHER	2
K83-4-4	DFHM0285XC	LID LATCH PLATE	1
K83-4-5	DFHR3588WA-0	PCMCIA COVER SHEET SD	1
K83-4-6	DFKE0799ZA-0	TABLE LATCH KNOB	1
K83-4-7	DFUN0068XA	LID KNOB SPRING	1
K83-4-8	DFUS0292ZB	LID KNOB SPRING PLATE	1
K83-4-9	DRHM5025YA	SCREW	3
K83-5	DRQT26+D3FKL	SCREW	6
K83-6	DXQT3+F4FNLT	SCREW	2
K84	DFMX0383TA	INSULATION SHEET	10
K85	DFHR7518ZA	H CABLE SHEET	3
K86	DFUQ0101YA	SW SPRING	1
K87 ⚠	DFGT0963YA	RATED LABEL	1
K89	DFQT9675ZA	ENERGY STAR LABEL	1
K92	DFQT9948ZA	CENTRINO LABEL	1
K94	DFHM0279YA	GPS PLATE	1

K200	DFWV80A0354	LCD FRONT CABINET/TS PANEL ASS'Y	1
K200-1	DFKF9031ZA-0	FRONT CASE ASS'Y	1
K200-1-1	DRHM5025YA	SCREW	2
K200-1-2	DFHG1634YA-0	LCD CABINET CUSHION A	2
K200-1-3	DFHG1635ZA-0	LCD CABINET CUSHION B	2
K200-1-4	DFHM0319YA	LCD ELE PASS	2
K200-1-5	DFHM0321ZA	D WASHER	2
K200-1-6	DFHM0322ZA	SPRING WASHER	2
K200-1-7	DFHR3469ZA	PEN FRICTION SHEET	1
K200-1-8	DFHR6051ZE	PEN HOLDER	1
K200-2	DFHE0805ZA	MAGNET	1
K200-3	DFHP7149ZA	MAGNET TAPE	1
K200-30	DFWV84A0261	TOUCH SCREEN PANEL KIT	1
K200-30-3	DFHR3476ZA	SPACER A	2
K200-30-4	DFHR3477ZA	SPACER B	2
K200-30-30	DFHR3630ZA	TS FPC SPACER	1
K200-30-31	DFHR3674YA	TS TAPE	1
K200-30-35	DL3DV0180AAA	TS PANEL ASS'Y	1
K200-30-35-1	DFHR9071ZA	PROTECTION FILM	1
K201	DFWV80C0497	LCD REAR CABINET ASS'Y	1
K201-1	DFKM9032ZA-0	REAR CASE ASS'Y	1
K201-1-1	DFHR3468ZA-0	PANA BADGE	1
K201-1-2	DFHG1634YA-0	LCD CABINET CUSHION A	2
K201-1-3	DFHG1635ZA-0	LCD CABINET CUSHION B	2
K201-1-4	DFHM0319YA	LCD ELE PASS	2
K201-1-5	DFHM0321ZA	D WASHER	2
K201-1-6	DFHM0322ZA	SPRING WASHER	2
K201-2	DFHR3563YA	LCD REAR CUSHION C	2
K201-3	DFHR3564YA	LCD REAR CUSHION D	1
K201-4	DFHR3565YA	LCD REAR CUSHION E	2
K201-5	DFHR3566YA	LCD REAR CUSHION F	3
K201-6	DFHR3460YA	LCD REAR CUSHION A	2
K201-7	DFHR3461YA	LCD REAR CUSHION B	2
K201-30	DFHR3567YA	LCD REAR CUSHION G	2
K202	DFBH3029VA	LCD HINGE	1
K203	DFHE0814ZA	CONDUCTIVE SHEET	1
K205	DFHM0325ZA	CABLE HOLD PLATE	2
K206	DFHR3432ZA	ANT CABLE CUSHION	3
K207	DFHR3464WA	LCD SIDE CUSHION B	2
K208	DFHR3516ZA	PROTECT SHEET, SCREW	1
K209	DFHR3572YA	LCD CABLE HOLDER SHEET	1
K210	DFHR3573YA	LCD SIDE CUSHION E	2
K211	DFHR3574YA	LCD SIDE CUSHION F	1
K212	DFHR3614ZA	CABLE STOPPER TAPE	1
K213	DFHR3631YA	INVERTER CASE	1
K214	DFHR3A65ZA	INSULATION SHEET INV. CASE	1
K215	DFHR6193YA-1	ANTENNA COVER	2
K216	DFHR6106ZC-1	TABLET LATCH COVER	1
K217	DFHR6081ZA-0	CABLE HOLDER	2
K218	DFKE9059YA	LOCK PLATE ASSY	1
K219	DFKE9074ZA-0	HINGE TOP COVER ASSY	1
K220	DFMC0685ZA	CONDUCTIVE SHEET, LCD	1
K222	DFMX0383TA	INSULATION SHEET	4
K223	DFQT6077YA	CAUTION LABEL, LCD	1
K224	DFUQ0100ZA	LOCK SPRING	2
K225	DRQT26+E5FKL	SCREW	16

K226	DXYN2+J6FNL	SCREW	10
K227	DXYN3+J10FNL	SCREW	2
K228	DXYN3+J8FNL	SCREW	2
K229	DFHE5025XA	SCREW	6
K230	DFHR3472ZA-0	TOUGH BADGE	1
K252	DFMC0808ZA	INVERTER MIL COVER	1
K253	DFMC0816ZA	INVERTER MIL SHEET	1
K301	DFQT9869ZA-0	RELEASE LABEL	1
K400	DFHE5025XA	SCREW	13
K401	DRHM5025YA	SCREW	13
K402	DFHE5058ZB	SCREW, DSUB	4
K404	DRQT2+D2FKL	SCREW	4
K405	DXQT3+D4FKNL	SCREW	2
K406	DRSB2+5FKL	SCREW	16
K407	DXYN2+J12FNL	SCREW	2
K408	DXYN2+J18FNL	SCREW	3
K409	DRHM0061ZA	SCREW	13
K410	DXYN4+J8FNL	SCREW	4
K411	DRHM5117ZA	SCREW	2
K412	DRSB2+3FKL	SCREW	6
K414	XSB2+4FNL	SCREW	4
K500	DFHG1633ZB-0	RUBBER, SERIAL LID	1
K501	DFHR3539YA	SHEET, HEAD SET DUMMY	1
K503	DFHR3644ZA	TAPE, SIMM DUMMY	1
K550	DFHR3488ZA	SHEET, EXT ANTENNA	1
K551	DFHE5108ZA	SCREW	2
K600	DFMY0419ZA	DIMM THERMAL RUBBER	1
K601	DRYN3+J6FKL	SCREW	2
K602	DFHR3809ZB	GPS HOLE SHEET B	1
K603	DFHR3964ZA	PCMCIA SHEET 2	2
K604	DFHR3969ZA	PCMCIA SHEET 3	1
K605	DFHR3937ZA	HDD CAB CUSHION	1
K606	DFQC9009ZC-0	STRAP BG ASS'Y	1
K607	DFHR8516ZA	FFC SPACER	1
K608	DFQT9974ZA	WINDOS XP LABEL (FOR NOTE)	1
K620	DFHR3741ZA	FFC CN STOPPER	2
K663	DFHR3741ZA	STOPPER, FFC CN	1
K671	DFHG1790ZA	BAT CUSHION	1
K685	DFMC0848YA	GASKET	1
K686	DFMX1200ZA	INS. SHEET, TOUCH PAD CARD	1
K687	DFMY0248YA	CPU HEATSINK RUBBER	1
K688	DFHM0378ZA	SD ANGLE	1
K689	DXQN2+A22FNL	SCREW	3
K690	DXSN2+18FNL	SCREW	1
K693	DFHR3859ZA	DC IN SHEET	1
K695	DFHR3B12ZA	SHEET, SD BOARD	1
K696	DFHR3B65ZA	CUSHION, HDD PACK	2
K697	DFHR3B84YA	SPACER, SD ANGLE (1)	1
K698	DFHR3B85ZA	SPACER, SD ANGLE (2)	2
K699	DFHR3B87ZA	SHEET, SD FFC	1
K702	DFHR8517ZA	CUSHION, HDD	2
K703	DFHE0915ZA	SHEET	1
K704	DFHR3C06ZA	INVERTER SHEET (1)	1
K705	DFHR3C07ZA	INVERTER SHEET (2)	1
K708	DFMD3125ZA	BACK PLATE, KENSINGTON 2	1
K709	DFHP7200ZA	TAPE, AHDESIVE	1

K718	DFHR6220ZA	DIMM HOLDER	1